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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,958	09/24/2003	Karl A. Hanold	155692-0034	9431

1622 7590 03/23/2005

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EXAMINER	
JOHNSTON, PHILLIP A	

ART UNIT	PAPER NUMBER
2881	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EK

Office Action Summary	Application No.	Applicant(s)	
	10/672,958	HANOLD ET AL.	
	Examiner	Art Unit	
	Phillip A. Johnston	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-91* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-91* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3-18-2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. See MPEP 706.02 [R-2] as follows: If the application is a continuation-in-part of an earlier U.S. application or international application, any claims in the new application not supported by the specification and claims of the parent application have an effective filing date equal to the filing date of the new application. Any claims, which are fully supported under 35 U.S.C. 112 by the earlier parent application have the effective filing date of that earlier parent application.

For example, Claim 1 recites "A monitor that can detect a plurality of trace molecules, comprising: a housing with an ionizing chamber that is approximately at one atmosphere; a photoionizer that is coupled to said ionizing chamber; an electrospray ionizer coupled to said ionizing chamber; a switch that controls the operation of said photoionizer and said electrospray ionizer to control different modes of operation; and, a detector that is coupled to said ionizing chamber."

The limitations in independent claim 1 above, regarding "a photoionizer that is coupled to said ionizing chamber; an electrospray ionizer coupled to said ionizing chamber; and, a detector that is coupled to said ionizing chamber", are fully supported by earlier parent application 09/596,307, but not fully supported by application 09/247,646. Thus, for the purposes of examining the present application, the earliest effective filing date regarding these limitations in independent claims 1,21,41,62-64,74, and 84 will be June 14, 2000.

On the other hand, the limitation in independent claim 1 above, regarding "a switch that controls the operation of said photoionizer and said electrospray ionizer to control different modes of operation", is not fully supported by earlier parent application 09/596,307, nor by application 09/247,646. Thus, for the purposes of examining the present application, the earliest effective filing date regarding the "switch limitation" in independent claims 1,21,41,62-64,74, and 84 will be September 24, 2003.

It is important to point out that the earlier parent application 09/596,307 discloses in Column 5, line 34-40 that, The photoionizer 100 can be operated in three different modes when the liquid spray is an electrospray device. The first mode is having ionization by both the liquid spray device 102 and the light sources 106. The second mode may be ionization with only the liquid spray device 102. The third mode may be ionization with only the light sources 106. These modes may be rapidly switched.

However, nowhere does the parent application disclose a switch that controls the operation of said photoionizer and said electrospray ionizer to control different modes of operation. The earlier parent application 09/596,307 does not disclose a switch or a switching means to control the electrospray ionizer, only switching lamps on and off to control modes is disclosed.

Claims Rejection - 35 U.S. C. 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-91 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Park, U. S. Patent No. 6,410, 914.

Park (914) discloses the following;

(a) An ionization chamber for a mass spectrometer having ports 42-45, which accept plural orthogonal sources including electrospray and lamps that are multiplexed (switched) for synchronous and/ or asynchronous operation, as recited in claims 1,21,41,55,56,62-64,74, and 84. See Column 4, line 54-67; Column 7, line 53-61; Column 8, line 52-61; Figures 4A-4C, and Figure 7 below;

FIG. 4A

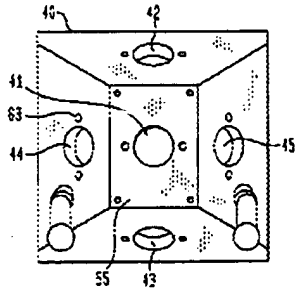


FIG. 4B

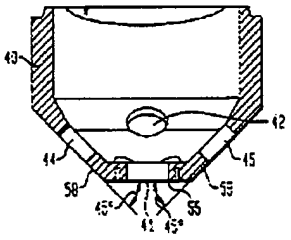


FIG. 4C

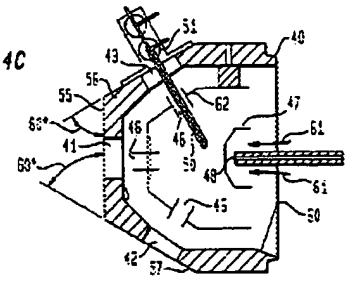
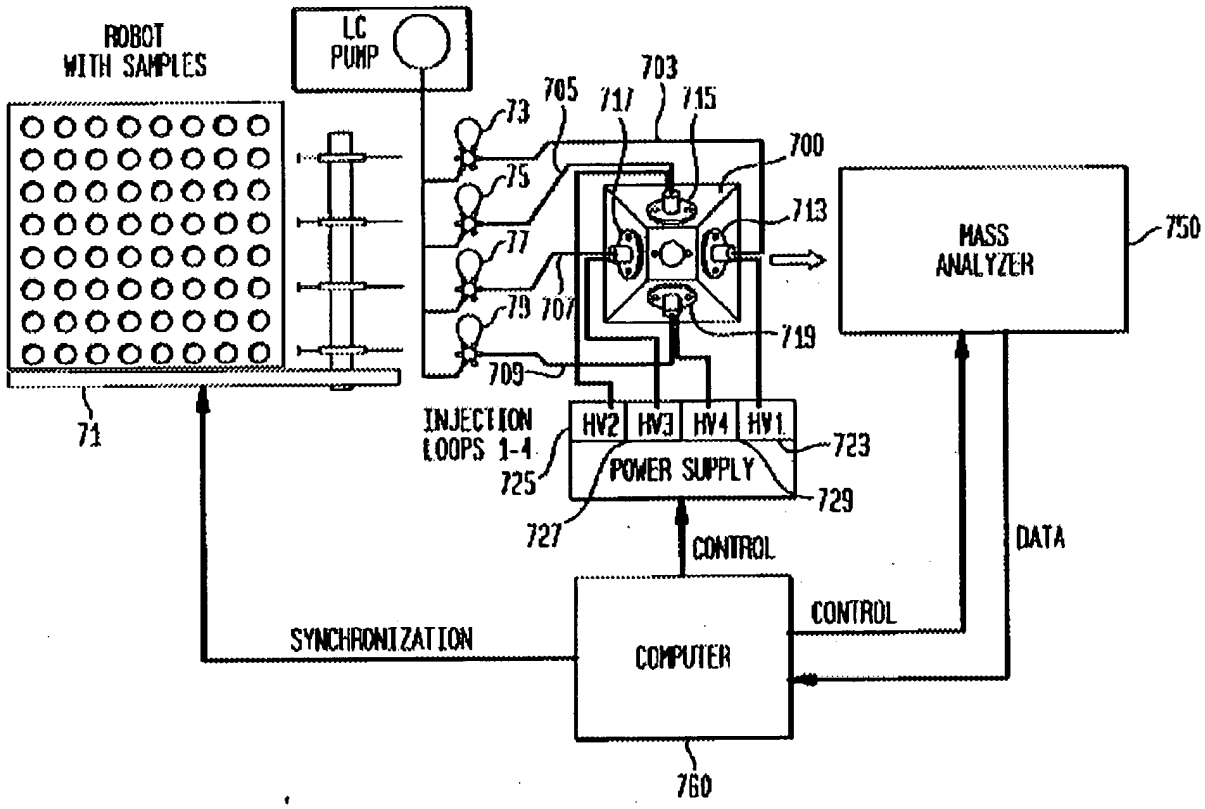


FIG. 7



(b) The use of plural source types including electrospray, photoionization and chemical, as recited in claims 1-4,15,21-24,41-43,55-57,62-65,74,75,84, and 85. See Column 1, line 65-67; Column 2, line 1-25; and Column 8, line 52-61;

It is implied herein that Park's (914) disclosure of the use of a laser desorption-ionization source in the chamber is equivalent to use of a photoionization source, as claimed above.

(c) The use of computer 760 to control source switching sequentially and/or simultaneously , as recited in claims 7-16,27-36,44-5,68-73,78-83, and 86-91. See Column 4, line 54-67; Column 11, line 12-32; Column 12, line 12-31; Column 13, line 1-15; and Figures 9,10, and 12 below.

FIG. 9

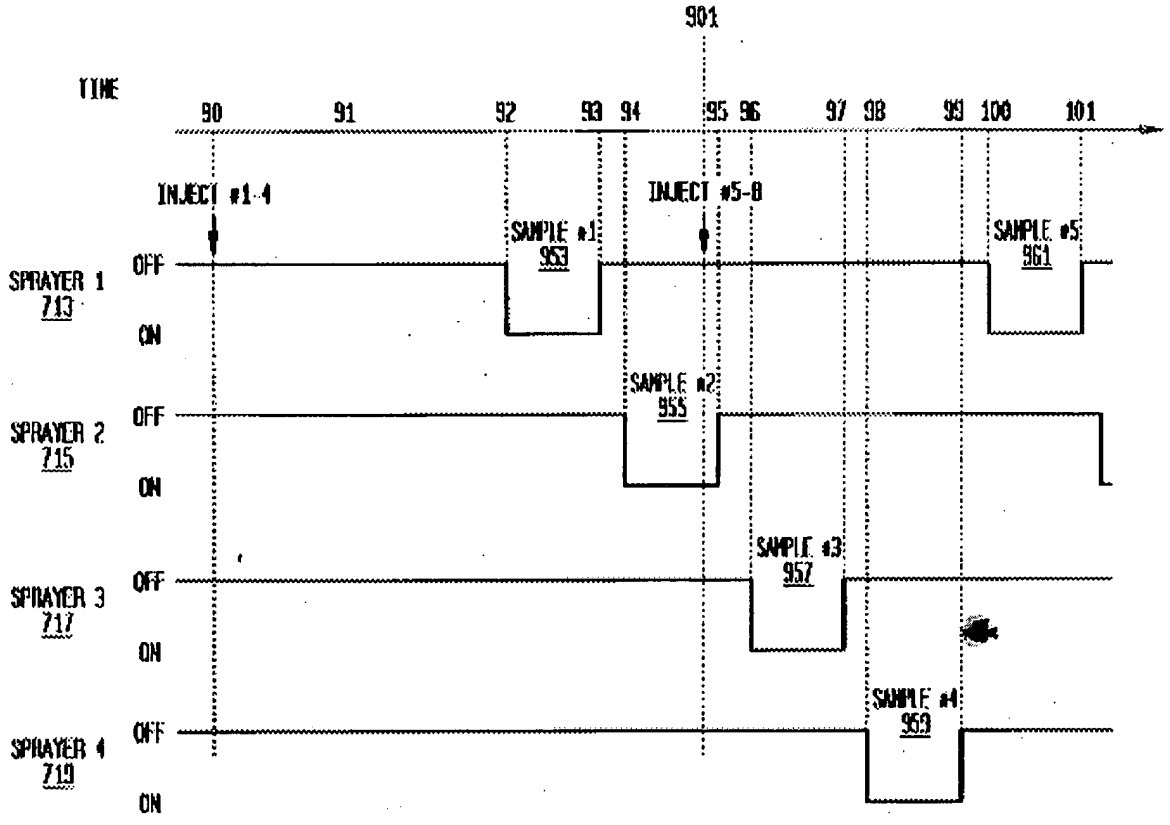


FIG. 10

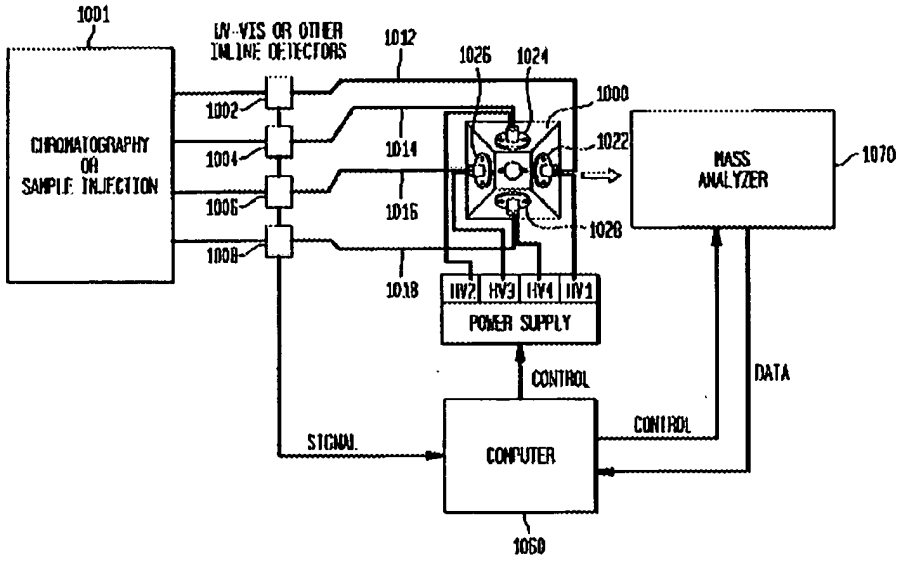
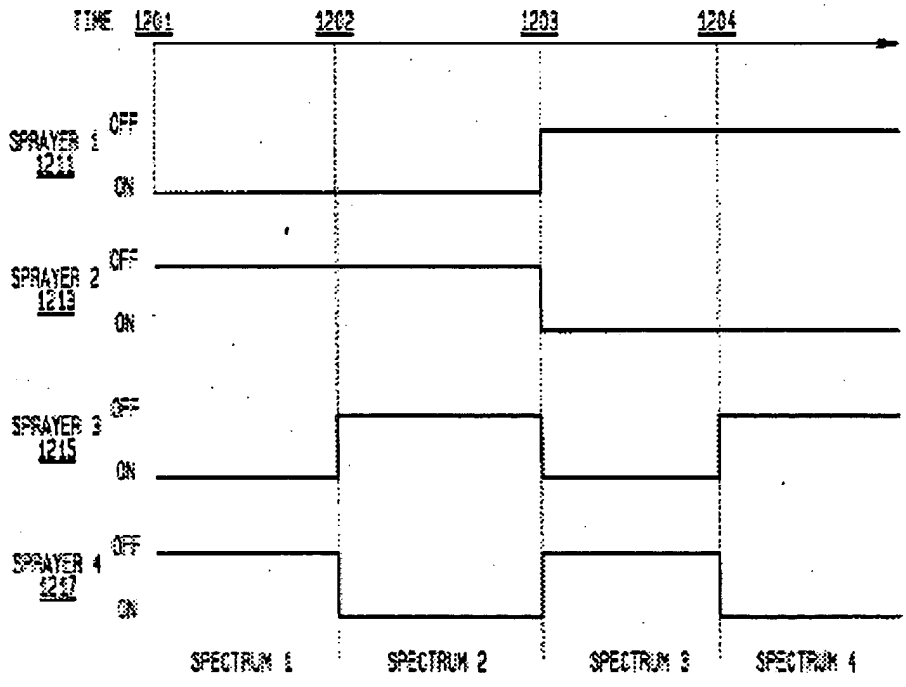

1001
UV-VIS OR OTHER INLINE DETECTORS
1012
1026
1024
1000
1002
1004
1006
1008
CHROMATOGRAPHY OR SAMPLE INJECTION
1014
1016
1022
MASS ANALYZER
1070
1028
1018
HV2
HV3
HV4
HV1
POWER SUPPLY
CONTROL
DATA
SIGNAL
COMPUTER
CONTROL
1060

FIG. 12


TIME
1201
1202
1203
1204
SPRAYER 1
1211
OFF
ON
SPRAYER 2
1213
OFF
ON
SPRAYER 3
1215
OFF
ON
SPRAYER 4
1217
OFF
ON
SPECTRUM 1
SPECTRUM 2
SPECTRUM 3
SPECTRUM 4

(d) The use of a differentially pumped vacuum interface, sample pumps, injection loops and transfer lines, as recited in claims 5,6,17-20,25,26,37-40,52-55,58-61,66-73, and 77-83. see Column 2, line 51-61; Column 5, line 34-40; Column 9, line 58-67; Column 10, line 8-28; and Figure 7 above;

(e) Sprayers 713, 715, 717 and 719 are electrically isolated from the ionization chamber 700 and the potential on each sprayer is controlled via high voltage power supplies 723, 725, 727 and 729, as recited in claims 14 and 39. See Column 10, line 1-7; and Figure 7 above.

Conclusion

3. Any inquiry concerning this communication or earlier communications should be directed to Phillip Johnston whose telephone number is (571) 272-2475. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor John Lee can be reached at (571) 272-2477. The fax phone number for the organization where the application or proceeding is assigned is 703 872 9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJ

March 18, 2005

JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800